

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows:

1. - 19 . **(Canceled)**
20. **(New)** A process for enhancing the oil recovery from an oil well by proliferation of a microbial consortium at a temperature up to 90°C, the process comprising steps of:
  - a) inoculating the microbial consortium having accession no MTCC S2-001, in a nutrient medium I in the presence of an anaerobic gas mixture of N<sub>2</sub>, CO<sub>2</sub>, H<sub>2</sub>;
  - b) incubating the microbial consortium of step (a) at a temperature up to 90°C to obtain seed population of microbial consortium;
  - c) inoculating the seed population of the microbial consortium of step (b) under aseptic conditions into a nutrient medium II to obtain a biological solution;
  - d) injecting the biological solution of step (c) into the oil well, followed by injecting water into the oil well to push the entire biological solution into the pores of the oil well, allowing the microbial consortium to proliferate and dissociate the oil, and
  - e) obtaining enhanced oil recovery from the oil well.
21. **(New)** The process as claimed in claim 20, wherein said microbial consortium comprises anaerobic bacteria.
22. **(New)** The process as claimed in claim 20, wherein said microbial consortium comprises anaerobic bacteria selected from the group consisting of *Thermoanaerobacterium* species, *Thermotoga* species and *Thermococcus* species.
23. **(New)** The process as claimed in claim 20, wherein said nutrient medium I comprises mineral nutrients, nitrogenous substrates, reducing agents, carbon source, vitamins and trace minerals.

24. **(New)** The process as claimed in claim 23, wherein said mineral nutrients comprise  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ ,  $\text{K}_2\text{HPO}_4$  and  $\text{KH}_2\text{PO}_4$
25. **(New)** The process as claimed in claim 23, wherein said nitrogenous substrates comprise  $\text{NH}_4\text{Cl}$ , Yeast extract and Tryptone.
26. **(New)** The process as claimed in claim 23, wherein said reducing agents comprise cysteine and  $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$ .
27. **(New)** The process as claimed in claim 23, wherein said carbon source comprises molasses and corn steep liquor.
28. **(New)** The process as claimed in claim 23, wherein said trace minerals comprises Nitrilotriacetic acid (sodium salt),  $\text{MgSO}_4$ ,  $\text{MnSO}_4 \cdot 2\text{H}_2\text{O}$ ,  $\text{NaCl}$ ,  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ ,  $\text{CoCl}_2/\text{CoSO}_4$ ,  $\text{ZnSO}_4$ ,  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ ,  $\text{AlK}(\text{SO}_4)_2$ ,  $\text{H}_3\text{BO}_3$  and  $\text{Na}_2\text{MoO}_4 \cdot 2\text{H}_2\text{O}$ .
29. **(New)** The process as claimed in claim 23, wherein said vitamins comprises Biotin, Folic acid, Pyridoxine HCl, Thiamine HCl, Riboflavin, Nicotinic acid, DL-Calcium Pantothenate, P-Aminobenzoic acid, Vitaminin  $\text{B}_{12}$  and Lipoic acid.
30. **(New)** The process as claimed in claim 20, wherein said nutrient medium II comprises mineral nutrients, nitrogenous substrates, reducing agents, carbon source, vitamins and trace minerals.
31. **(New)** The process as claimed in claim 30, wherein said mineral nutrients comprises  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ ,  $\text{K}_2\text{HPO}_4$  and  $\text{KH}_2\text{PO}_4$ .
32. **(New)** The process as claimed in claim 30, wherein said nitrogenous substrate is  $\text{NH}_4\text{Cl}$ .
33. **(New)** The process as claimed in claim 30, wherein said reducing agents comprises cysteine and  $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$ .

34. **(New)** The process as claimed in claim 30, wherein said carbon source comprises molasses and corn steep liquor.
35. **(New)** The process as claimed in claim 30, wherein said trace minerals comprises Nitrilotriacetic acid (sodium salt),  $\text{MgSO}_4$ ,  $\text{MnSO}_4 \cdot 2\text{H}_2\text{O}$ ,  $\text{NaCl}$ ,  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ ,  $\text{CoCl}_2/\text{CoSO}_4$ ,  $\text{ZnSO}_4$ ,  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ ,  $\text{AlK}(\text{SO}_4)_2$ ,  $\text{H}_3\text{BO}_3$  and  $\text{Na}_2\text{MoO}_4 \cdot 2\text{H}_2\text{O}$
36. **(New)** The process as claimed in claim 30, wherein said vitamins comprises Biotin, Folic acid, Pyridoxine HCl, Thiamine HCl, Riboflavin, Nicotinic acid, DL-Calcium Pantothenate, P-Aminobenzoic acid, Vitaminin  $\text{B}_{12}$  and Lipoic acid.
37. **(New)** A microbial consortium that is deposited under accession no MTCC S2-001.
38. **(New)** A process for enhancing the oil recovery from an oil well comprising steps of:
- a) injecting a consortium of bacteria cultured from the consortium deposited under accession no. MTCC S2-001 into the oil well, followed by injecting water into the oil well to push the entire biological solution into the pores of the oil well, allowing the microbial consortium to proliferate and dissociate the oil, and
  - b) obtaining enhanced oil recovery from the oil well.